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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LE, BRIAN Q

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,920

Applicant(s)

KINJO, NAOTO

Examiner

Brian Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/07/06</u> | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/07/2006 has been entered.

Response to Amendment and Arguments

2. Applicant's arguments with regard to claims 1-9 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding claim 1, the Applicant argues (page 10) that Friendman does not teach the concept of the algorithm used is randomly selected from a plurality of algorithms. Surprisingly, the Applicant is arguing for something is deleted from the claim limitation. Second, even if the limitation still in the claim, the Reference still can be read on it. As indicated in previous Office Actions, hash algorithm can be computed in many different ways (column 3, lines 26-31). Thus when Friendman discloses the teaching of providing a hash such as the encrypted hash (column 4,, lines 34-46), clearly, the algorithm is randomly selected from plurality algorithms or different ways of computing hash.

The Applicant further argues (bottom of page 10) that "public key" cannot be read is "identification information". As clearly explained in previous Office Actions, when public key is a unique data related to the private key so that the digital data encrypted with the private key and can be decrypted by using the public key (abstract). Thus, it is so clear that "public key" is using as identification information to decrypt the digital data. If the Applicant believes that the

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terminology of “identification information” should be read differently, then the Applicant MUST clearly defined in the claim for specific interpretation.

Regarding claim 2, the Applicant argues (bottom of page 11) that the Examiner failed to identify Friedman discloses identifying a file name or a photographer associated with a produced image. Again, the Applicant did not claim such limitation. The Applicant claimed as follow “...filed name of said photographic image or an identification information for a photographer of said photographic image”. Thus, Friedman teaches this limitation at column 4, lines 40-46 and column 6, lines 2-30. In addition, the Applicant argues (top of page 12) that Friedman does not teach image characteristic amount. Again, if the Applicant would like the Examiner to specifically interpret this, then the Applicant must clearly define its definition in the claim. Otherwise, “image hash” can be broadly and reasonably interpreted as “image characteristic amount”.

Regarding the Mintzer Reference, the Applicant argues (page 12) that Mintzer failed to teach or include an imaging device. The Examiner is quite unsure of the Applicant’s intention regarding this argument since the Reference clearly teaches a system of processing images which can be clearly read as an imaging device. Further, apparatus such as image server (FIG. 1, element 108) can also be read as an image device.

Also regarding to the argument wherein the Applicant argues (page 15) that Mintzer does not disclose the concept of the exact matching between the data is not required. Again, due to broadly claimed limitation, the Examiner reasonably interpreted the teaching of Mintzer wherein the matching process that the difference can be acceptable by the pre-defined threshold. (column 9, lines 22-31). To further assist the Applicant with the guidance with claim language

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interpretations so that the Applicant can add further/more details limitations from the specification to the claims to overcome the prior arts, the Examiner is presenting MPEP, section 2111, Claim Interpretation; Broadest Reasonable Interpretation as follow: "The court explained that "reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification into a claim,' to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim." The court found that applicant was advocating the latter, i.e., the impermissible importation of subject matter from the specification into the claim.). See also *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification."").

For the 35 U.S.C. 103 rejections, Applicant's arguments are directed toward various portions of prior arts cited by the Examiner. The Examiner points out that the rejections were based upon the entire reference. Therefore, Applicant is urged to consider the reference as a whole. When considering the cited portions within context the whole patent, it is seen that the claimed invention is rendered obvious.

Clearly, the Applicant does not make a bona fide attempt in expediting this Application. It seems that the Applicant merely wants to argue with the Examiner regarding broadly claimed

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limitations that one skilled in the art can reasonably rejected by interpretations, limitations are clearly teaches in the art and further more limitations that the Applicant had deleted from the claim's language. Clearly, this is not a bona fide attempt for the expedition of the application.

Thus, the rejections of all of the claims are maintained.

Claim Objections

3. The following sections of 37 CFR §1.75(a) and (d)(1) are the basis of the following objection:

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

(d)(1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

4. Claims 1, 4, 7, 16, and 20 are objected to under 37 CFR §1.75(a) and (d)(1) as failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention.

5. Claims 1, 4, 7, 16, and 20 are objected to because these claims are very difficult to understand due to the use of confusing language. Appropriate correction is required. The prior art rejection based on the Examiner's best understanding.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2, 4-5, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,499,294 to Friedman.

As to claim 1, Friedman discloses a method of preventing falsification of an image of a produced image produced in an imaging apparatus comprising the steps of:

extracting a first image characteristic amount (column 4, lines 33-37; the hash is the image characteristic amount), by using one specified algorithm (encrypted hash) (abstract and column 4, lines 40-46);

recording identification information of said produced image in said imaging apparatus said first image characteristic amount and one specified algorithm or information thereof into a database of an authentication section which authenticates a status that there is no falsification in said produced image (column 4, lines 43-45; the public key is the identification information, the public key is stored with the encrypted hash);

requesting authentication of an object image to said authentication section to which identification information is provided (request public key in order to decrypt the digital data) (abstract, first 10 lines).

reading out said first image characteristic amount (image hash) (abstract) and said one specified algorithm (calculating has with a predefined algorithm (abstract) or said information thereof recorded together with said identification information of said produced image which is

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the same as said identification information of said object image from said database in said authentication section (column 6, lines 23-29);

extracting a second image characteristic amount from said object image by using said one specified algorithm read out from said database (providing the true hash using public key as randomly selected algorithm) (camera also has its own storage database) (column 4, lines 47-54) (column 3, lines 60-67);

comparing said first image characteristic amount with said second image characteristic amount, extracted from said object image (column 6, lines 23-51); and

judging whether or not said object image is falsified after said image production, based on consistency between said first and second image characteristic amounts acquired from said comparison in order to prevent said falsification of said produced image based on said judgment (the authentication and hash image comparison process) (column 6, lines 23-51).

As to claim 2, Friedman discloses the method according to claim 1, wherein said imaging apparatus has a camera (Fig.3A), in which said produced image is a photographic image photographed by said camera, in which said identification information is at least an identification information of a file name of said photographic image or an identification information for a photographer of said photographic image (column 4, lines 42-43; since the public key is unique to the camera, it identifies the camera).

As to claim 4, Friedman discloses a method of preventing falsification of an image produced in an imaging apparatus, comprising the steps of:

producing an image to acquire a first image data of the produced image (column 5, lines 53-56),

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recording identification information for identifying said produced image and said first image data of said produced image into a database in an authentication section which authenticates that there is no falsification in said produced image (recording image file and digital signature) (column 4, lines 43-45; column 5, lines 61-63),

requesting authentication of an authentication object image to said authentication section, to which identification information is provided (The process of decrypting digital data when the public key is provided) (abstract, first 10 lines).

reading out said authentication data recorded together with said identification information of said produced image which is the same as said identification information of said authentication object image from said database in said authentication section (authenticate decrypted image hash with secured image hash) (abstract);

acquiring a second image data from said authentication object image (authentication and custodian image files) (column 10, lines 45-52);

comparing an acquired second image data of said authentication object image which has been requested to be authenticated by said authentication section, with said first image data read out from said databases in said authentication section (column 6, lines 2-51; here the image data are compared by comparing their hashes, i.e., characteristic amounts); and

judging whether or not said authentication object image is falsified after said image production, based on a consistency between said first and second image data acquired from said comparison in order to prevent said falsification of said produced image based on said judgment (the authentication and hash image comparison process) (column 6, lines 2-51).

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Regarding claim 5, Friedman discloses the method according to claim 4, wherein said imaging apparatus has a camera (Fig.3A), in which said produced image is a photographic image photographed by said camera, in which said identification information is an identification information of said camera or a file name of said photographic image or an identification information a photographer of said photographic image (column 4, lines 42-43; since the public key is unique to the camera, it identifies the camera).

Regarding claim 10, Friedman teaches the method wherein said one specified algorithm is selected from a plurality of algorithms in each photographing session of said produced image in said imaging apparatus (As indicated in previous Office Actions, hash algorithm can be computed in many different ways (column 3, lines 26-31). Thus when Friedman discloses the teaching of providing a hash such as the encrypted hash (column 4, lines 34-46), clearly, the algorithm is randomly selected from plurality algorithms or different ways of computing hash).

For claim 11, please refer back to the explanations and the teachings of claim 10.

Referring to claim 12, Friedman also discloses the method wherein said one specified algorithm is confidential (encrypted hash is confidential) (column 4, lines 43-46).

8. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,875,249 to Mintzer et al.

As to claim 7, Mintzer discloses a method of preventing falsification of a produced image produced in an imaging apparatus, comprising the steps of:

sending authentication data from an authentication section for authenticating a status that there is no falsification in a produced image which is produced by said imaging apparatus to said

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imaging apparatus (receive image hash once the public key is provided to decrypt) (column 6, lines 43-47),

recording said authentication data and identification information for identifying said produced image of said imaging apparatus into a database in said authentication section image (recording image file and digital signature) (column 6, lines 36-38) (column 4, lines 43-45; column 5, lines 61-63),

attaching said authentication data (FIG. 3A, element 12) to said produced image or embedding said authentication data into said produced image, when said imaging apparatus produces said produced image, extracting said authentication data from an authentication object image which has been requested to be authenticated in said authentication section (column 6, lines 25-27),

requesting authentication of an authentication object image to said authentication section, to which identification information is provided (verification process) (FIG. 5, elements 502 and 512).

reading out said authentication data recorded together with said identification information of said produced image which is the same as said identification information of said authentication object image from said database in said authentication section (generating/reading/and verifying key) (FIG. 5, elements 501, 502, and 512);

extracting said authentication data attached to or embedded into said produced image from said authentication object image which has been requested to be authenticated in said authentication section (watermark values extraction) (FIG. 5, element 503);

comparing said extracted authentication data with said authentication data read out from said database (column 6, lines 57-64); and

judging whether or not said authentication object image is falsified after said image production, based on a consistency between said extracted authentication data and said authentication data acquired from said comparison in order to prevent said falsification of said produced image based on said judgment (the authentication and hash image comparison process) (column 6, lines 57-64).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman.

As to claims 3 and 6, Friedman does not disclose that the imaging apparatus is a computer. However, the Examiner takes Official Notice that using computers as imaging apparatus is well known in the art. It would have been obvious to one of ordinary skill in the art to adapt Friedman's invention to a computer imaging apparatus because of the proliferation of computers in the art of image processing.

10. Claims 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Friedmand and U.S. Patent No. 5,875,249 to Mintzer.

Regarding claims 13-14, Friedman does not explicitly teaches the comparison judgment process wherein when looking at the consistency the exact matching between the data is not

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required. Mintzer further teaches a method of images authentication and verification wherein the comparison judgment step looking at the consistency the exact matching between the data is not required (the matching process wherein the difference can be acceptable by the pre-defined threshold) (column 9, lines 22-31). Modifying Friedman's method of preventing falsification of image production according to Mintzer would be able to allow consistency tolerance in matching data. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Friedman according to Mintzer.

For claim 15, Mintzer further teaches the method wherein said image data are entire data of said produced image and said authentication object image; respectively, compressed image data compressed from said entire image data (column 5, lines 1-15). Modifying Friedman's method of preventing falsification of image production according to Mintzer would be able to verify the content of the image entirely (column 5, lines 1-20). This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Friedman according to Mintzer.

For claim 16-18, please refer back to claims 10-11 and 16 for further teachings and explanations.

For claim 19, please refer back to claims 12 and 15 for further teachings and explanations.

Regarding claim 20, Friedman teaches the method of attaching or embedding algorithm in said authentication (FIG. 3A). However, Friedman does not explicitly teach the authentication data is watermark information. Mintzer further teaches an embedding algorithm wherein authentication data can be watermark information (column 3, lines 25-38). Modifying

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Friedman's method of preventing falsification of image production according to Mintzer would be able to generate invisible watermark, which prevents the attacker from restoring the altered visible mark stamped onto the image (column 3, lines 25-38). This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Friedman according to Mintzer.

For claims 21-22, please refer back to claims 10-11 for further teachings and explanations.

For claim 23, please refer back to claim 12 for the teaching and explanation.

For claim 24, please refer back to claim 13-14 for the teachings and explanations.

11. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mintzer and Friedman.

As to claim 8, Mintzer does disclose that said imaging apparatus has a camera, in which said produced image is a photographic image photographed by said camera. Friedman further teaches the image apparatus comprises a digital camera (FIG. 3A, element 11) for identification information or a file name of said photographic image (hash file/computer file for images) (column 3, lines 60-65 and column 4, lines 30-40). Modifying Mintzer's method of preventing falsification of image production according to Friedman would be able to utilize such an imaging apparatus as a camera due to its convenience, as well as the added benefit of providing authentication to the camera. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Mintzer according to Friedman.

As to claim 9, similar as discussed in claim 8, Friedman further teaches a computer to process the claimed limitation (column 9, lines 60-65).

Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q. Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BL
April 11, 2006


JINGGE WU
PRIMARY EXAMINER